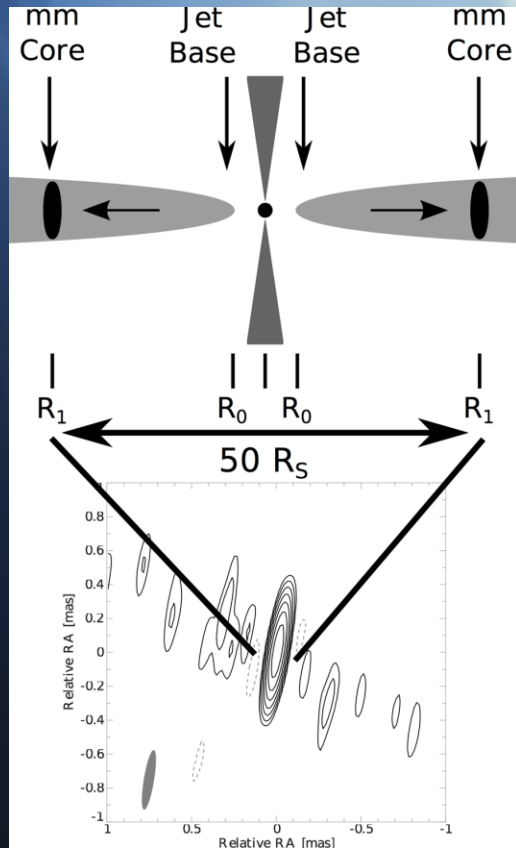


Resolving the Jet-Launching Region in NGC1052



Matthias Kadler¹

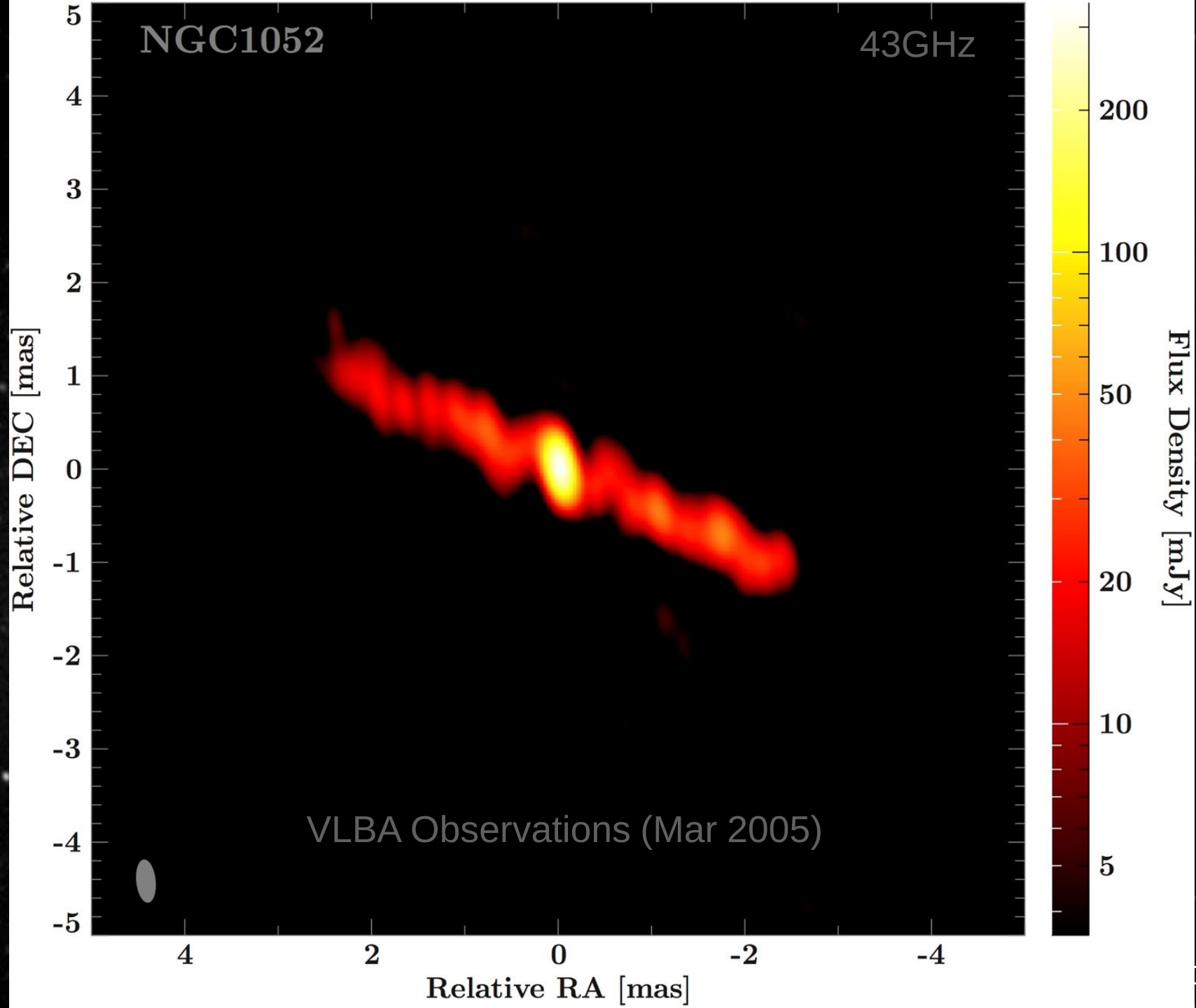
R. Schulz^{1,4}, A.-K. Baczko^{1,4}, E. Ros², T. Krichbaum², I. Marti-Vidal³, J. Wilms⁴

¹Universität Würzburg, ²MPIfR, ³Onsala Space Obs., Dr. Remeis Sternwarte Bamberg

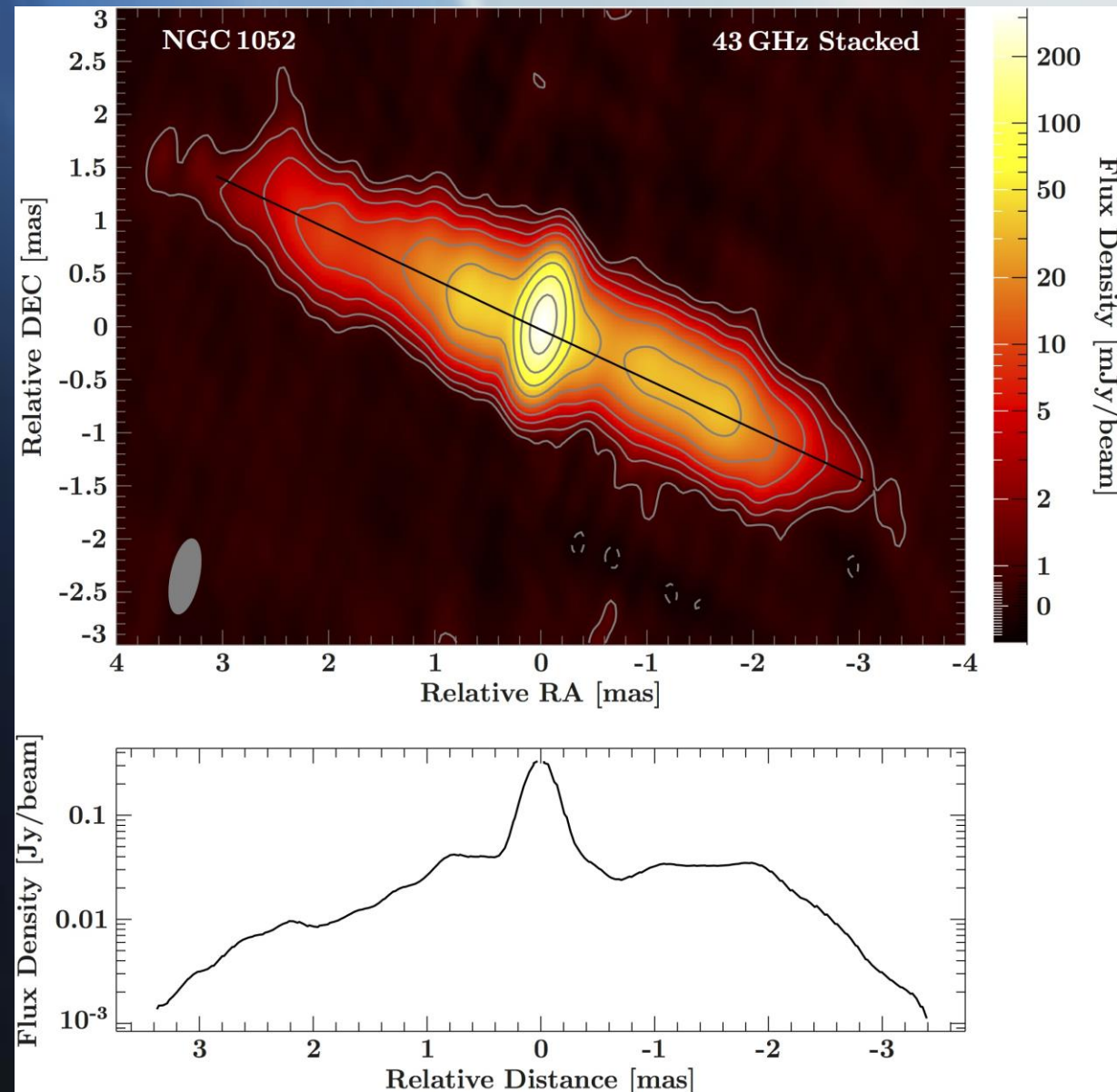
Julius-Maximilians-
**UNIVERSITÄT
WÜRZBURG**



ASTRO WÜRZBURG



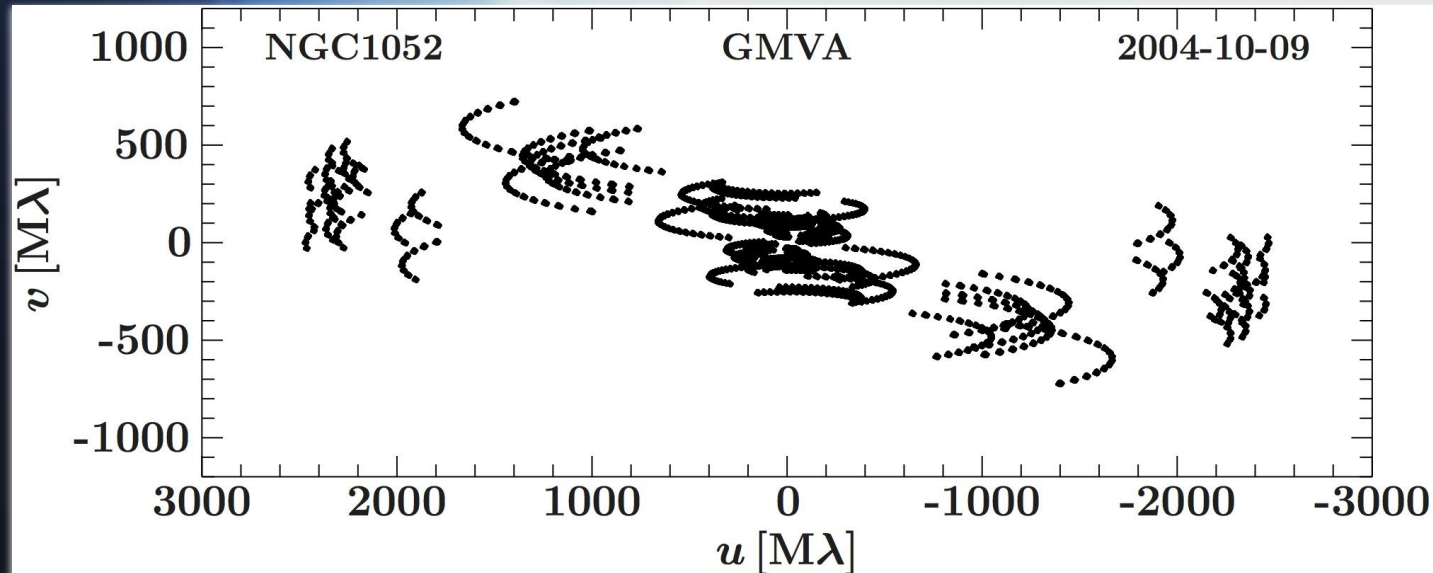
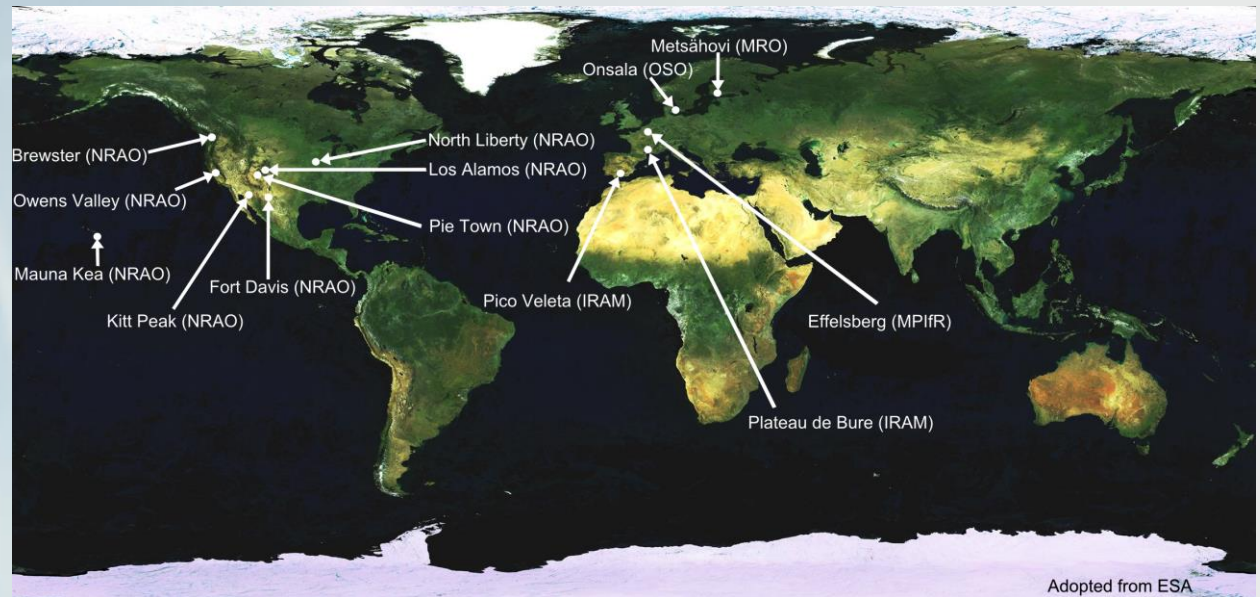
7mm VLBA Monitoring



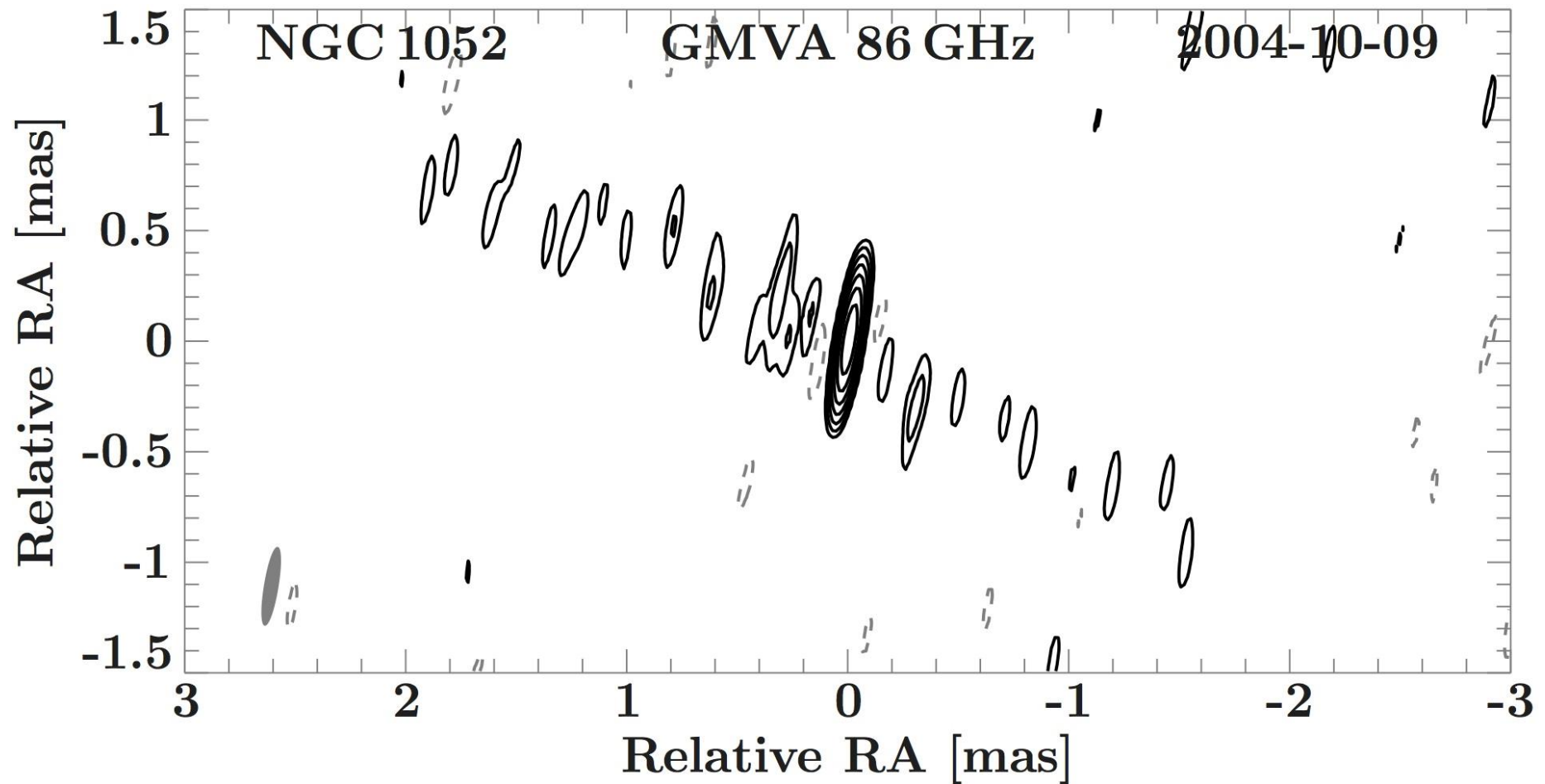
- Almost symmetric jet-counterjet structure over ~ 4 years
- Inclination angle close to 90°
- Asymmetries:
 - Bending, differential cooling, variable absorption? (Baczko et al., in prep)
- Persistent central core

3mm GMVA Observation (2004)

- 13 antennas
- 15 hours
- 8 sub-bands, 16MHz
- 512MBit/s

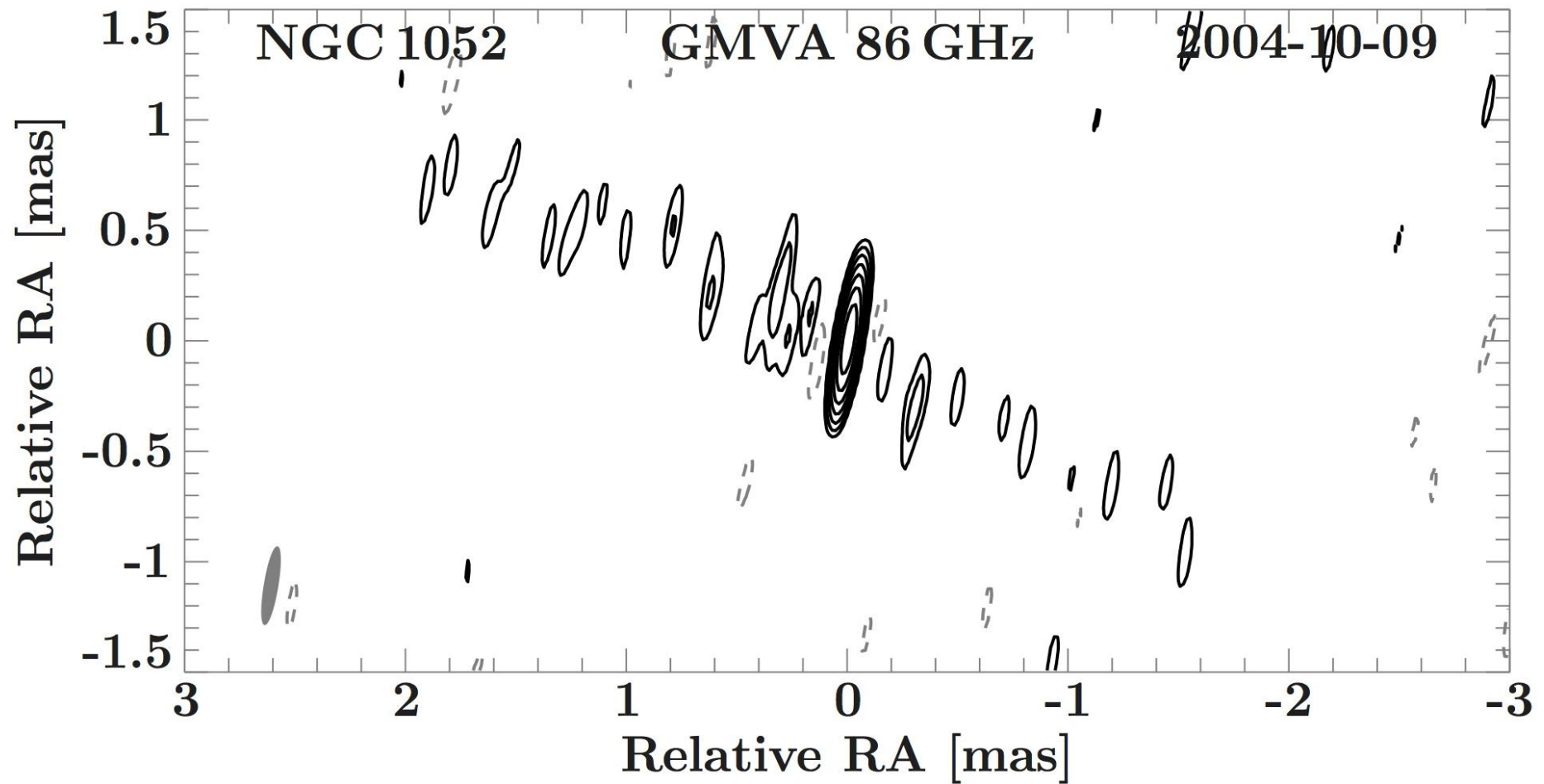


Declination: -8°

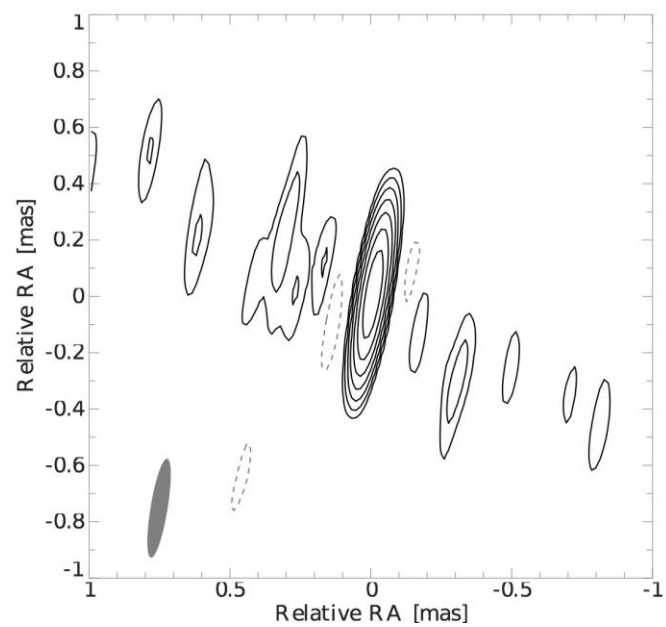
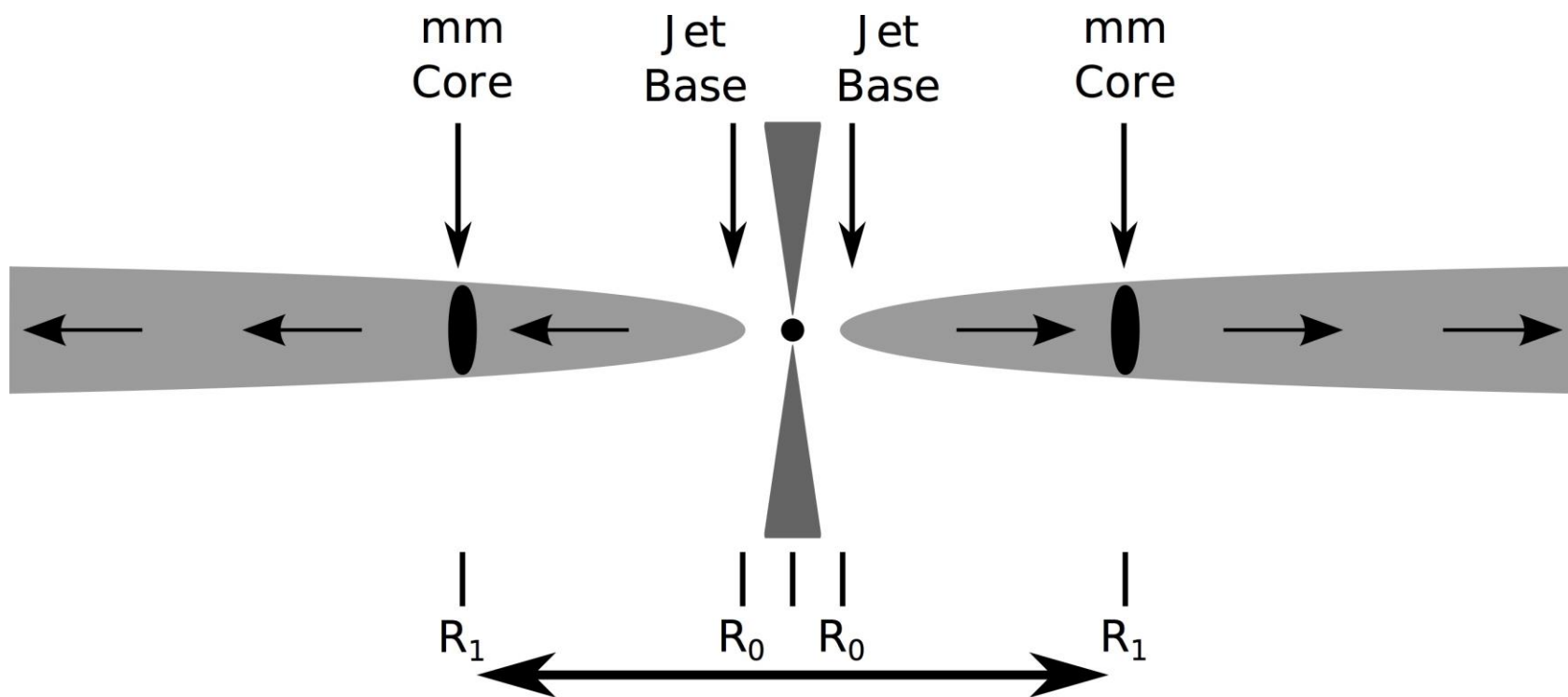


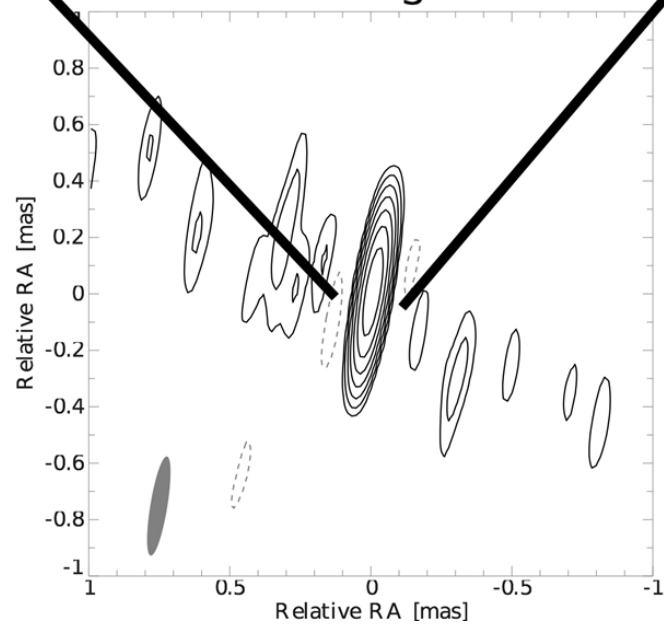
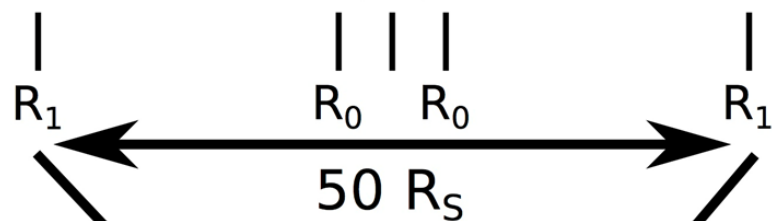
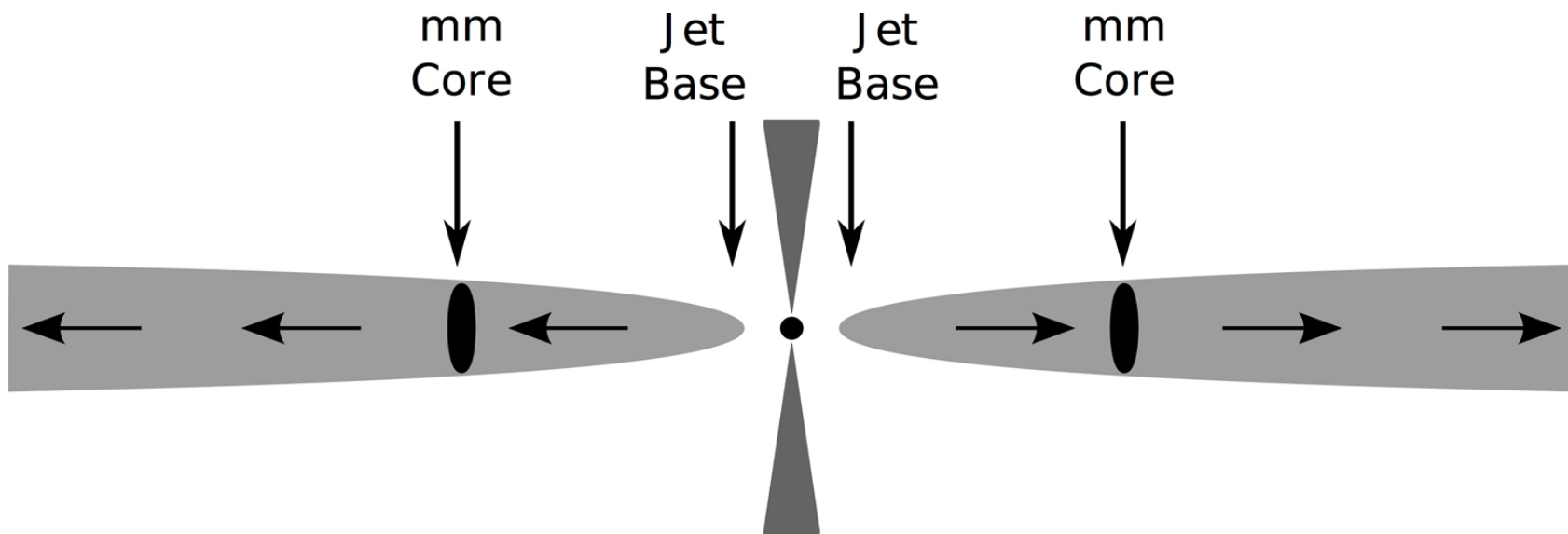
Uniform-weighting beam: $(353 \times 58) \mu\text{as}$

Image sensitivity: 1.2 mJy/beam; dynamic range: 340:1

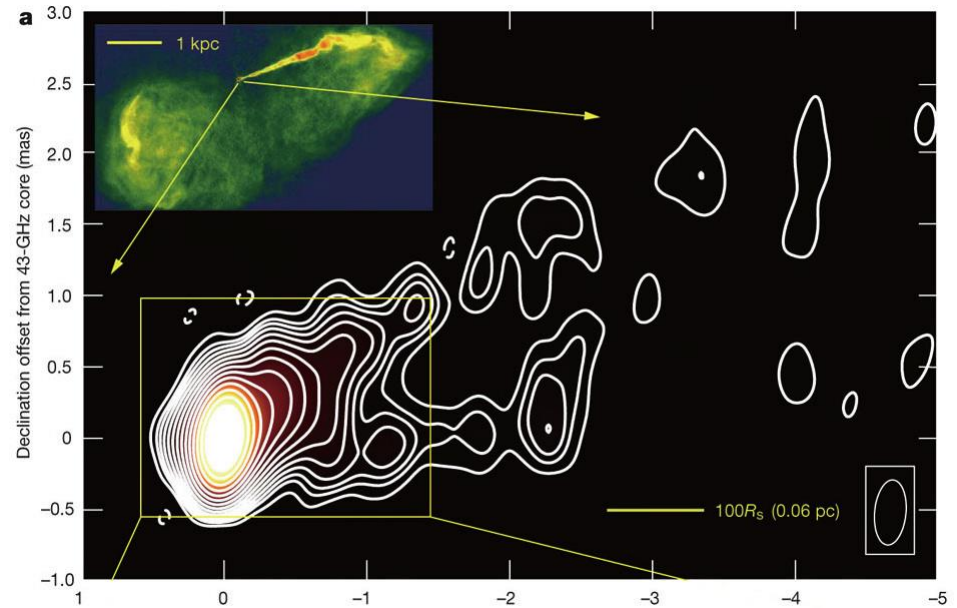
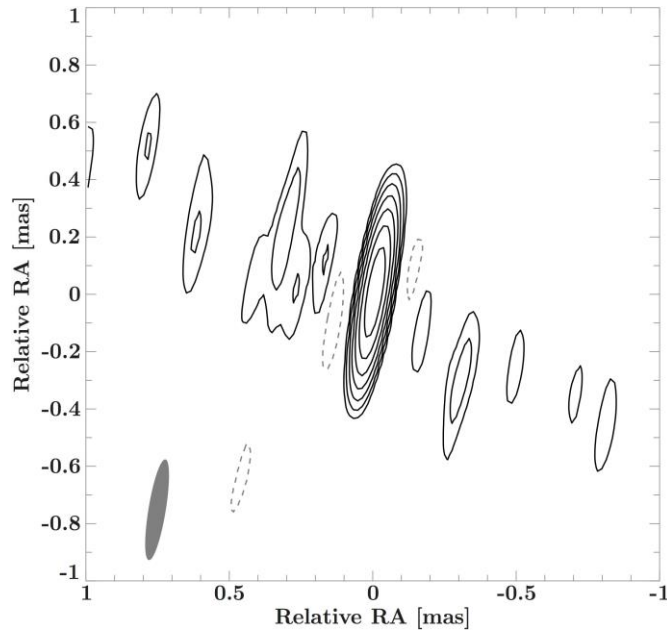


Central core: $T_B = 5 \times 10^{11} \text{ K}$
Size (E-W) $< 8.6 \mu\text{as} \approx 50 R_S$





Comparison to M87



NGC1052

M87

Distance ~ 20 Mpc
 BH mass $M \sim 10^{8.2} M_{\odot}$
 Inclination angle close to 90°

~ 16.7 Mpc
 $M \sim 10^{9.8} M_{\odot}$ (*)
 $15 - 25^{\circ}$ (**)

(*) (Gebhardt & Thomas (2009)); (**) (Acciari et al. (2009))

Summary:

NGC1052 and (Future) mm-VLBI

- Bright core: 0.5-1 Jy
- Two jets
- Declination: -8°
- East-West oriented
- No beaming
- Probing scales $< 10R_S$ possible

